Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Device for checking or calibrating the angle-dependent alignment of a reference structure of a high-precision test piece (1), comprising

- a plinth (2, 2a, 2b)
- a retainer part (3) for retaining the test piece (1), the retainer part (3) being mounted so as to be rotatable relative to the plinth (2, 2a, 2b) about a retainer part axis (4) and an angle of rotation of the retainer part about the retainer part axis (4) between the plinth (2, 2a, 2b) and the retainer part (3) being measurable,
- a measuring part (5, 5a, 5b, 5c, 5d) having a measuring part bearing unit (6, 6a) for mounting the measuring part (5, 5a, 5b, 5c, 5d) so as to be rotatable relative to the plinth (2, 2a, 2b) about a measuring part axis (7) intersecting the retainer part axis (4) at right angles, an angle of rotation of the measuring part axis (7) between the plinth (2, 2a, 2b) and the measuring part (5, 5a, 5b, 5c, 5d) being measurable,
- an optical unit (8, 8a, 8b, 8c) having an optical detector (9) and arranged on the measuring part(5, 5a, 5b, 5c, 5d) in such a way that at least one test piece beam (10, 10a, 10b, 10c, 10d) interacting with the reference structure of the test piece (1) is detectable, which beam runs substantially in a plane through which the measuring part axis (7) passes perpendicularly and in which the retainer part axis (4) lies and which is intersected by a part of the measuring part (5, 5a, 5b, 5c, 5d)and produces at least one point (12) on the detector (9), and

- a control/regulation unit (13) which is formed and connected in such a way that the optical unit (8, 8a, 8b, 8c) can be automatically aligned by means of a motor relative to the reference structure of the test piece (1) by means of motor-powered adjustment of the retainer part (3) and of the measuring part (5, 5a, 5b, 5c, 5d)as a function of the position of the at least one point (12) on the detector (9), and the angle of rotation of the retainer part and the angle of rotation of the measuring part can be automatically determined, characterized in that
- the measuring part bearing unit(6, 6a) is arranged on a single side of the measuring plane (11) or in the measuring plane (11), and
- the measuring part ((5, 5a, 5b, 5c, 5d)has a basic shape which encompasses or encloses the point of intersection of the measuring part axis (7) with the retainer part axis (4) on the measuring plane (11) and hence the test piece (1) and is for a substantial part axially symmetrical with respect to the measuring part axis (7).

2. (Original) Device according to Claim 1, characterized in that a substantial part of the measuring part is in the form of a measuring rocker (5, 5a, 5b) with mirror symmetry with respect to a plane in which the measuring part axis (7) lies.

3. (Original) Device according to Claim 1, characterized in that a substantial part of the measuring part is formed so as to be rotationally symmetrical with respect to the measuring part axis (7) and has in particular the shape of a measuring wheel (5c) or measuring ring (5d) or of a disc.

4. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 3~~, characterized in that the measuring part (5, 5a, 5b, 5c, 5d) is formed so as to have at least two parts,

- the optical unit (8, 8a, 8b, 8c) being arranged on a first part-element of the measuring part (5, 5a, 5b, 5c, 5d) and
- an optical deflection element – in particular a reflective unit or an optical fibre – being arranged on a second part-element of the measuring part (5, 5a, 5b, 5c, 5d)

in each case in such a way that the test piece beam (10, 10a, 10b, 10c, 10d) can be deflected or can be guided to through the optical unit (8, 8a, 8b, 8c).

5. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 4~~ characterized in that

- the optical unit is in the form of an autocollimator (8, 8a) for checking the direction, comprising
  - an emitter (31a) for generating radiation,
  - the detector (9) and
  - an optical unit objective (34a) for shaping the radiation into a transmitted beam (35a, 35b) and for focusing the test piece beam (10, 10a, 10b) on to the detector (9),

  and
- the reference structure of the test piece (1) or a part connected to and interacting with the reference structure has a reflection surface (36, 39)for reflection of the transmitted beam (35a, 35b), the reflected transmitted beam forming the test piece beam (10, 10a, 10b).

6. (Original) Device according to Claim 5 characterized in that

- the autocollimator (8, 8a) has an auxiliary lens unit (37a) for variable shaping of the transmitted beam (35b) and of the test piece beam (10, 10b) and
- the reflection surface is formed by a convex or concave surface of a part forming the reference structure – in particular of a lens (39)of an objective (16) – of the test piece (1).

7. (Currently Amended) Device according to Claim 1 ~~any of claims 1 to 4~~ characterized in that

- the optical unit (8, 8a, 8b, 8c) is in the form of a camera and the optical detector (9) is in the form of a light-sensitive image sensor for recording an image and
- the control/regulation unit (13) is formed and connected in such a way that the motor-powered alignment of the optical unit (8, 8a, 8b, 8c) relative to the reference structure of the test piece (1) is effected as a function of the result of processing of the recorded image of the optical unit (8, 8a, 8b, 8c).

8. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 7~~, characterized in that an additional optical unit (15) – comprising in particular an additional emitter or an additional mirror or an additional camera – is arranged on the measuring part (5, 5a, 5b, 5c, 5d) on that side which is opposite the optical unit (8, 8a, 8b, 8c) with respect to the measuring part axis (7).

9. (Original) Device according to Claim 8, characterized in that

- the additional optical unit (15) is in the form of an autocollimator for checking the direction – in particular in relation to an eye piece of the test piece (1), and

- the control/regulation unit (13) is formed and connected in such a way that the motor-powered alignment of the optical unit (8, 8a, 8b, 8c) relative to the reference structure of the test piece (1) is effected as a function of the result of checking of the direction by the additional optical unit (15) in the form of an autocollimator.

10. (Original) Device according to Claim 8, characterized in that

- the additional optical unit (15) is in the form of a camera for recording an image and
- the control/regulation unit (13) is formed and connected in such a way that the motor-powered alignment of the optical unit (8, 8a, 8b, 8c) relative to the reference structure of the test piece (1) is effected as a function of the result of processing of the recorded image of the additional optical unit (15).

11. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 10~~, characterized in that

- the device is in the form of a test machine for checking a geodetic measuring instrument – in particular a theodolite, a level or a geodetic scanner – having an optical sighting unit (18) which defines a sighting axis and is rotatable about a vertical axis (20) and optionally pivotable about a tilting axis (21),
- the retainer part (3)is formed in such a way that a lower part (19) of the test piece can be fixed on the retainer part (3), the vertical axis (20) substantially coinciding with the retainer part axis (4) and optionally the tilting axis (21) substantially coinciding with the measuring part axis (7),

- the device is designed so that the optical sighting unit (18) and the optical unit (8, 8a, 8b, 8c) can aligned relative to one another about the retainer part axis (4) and the measuring part axis (7), the direction of the test piece beam (10, 10a, 10b, 10c, 10d) and that of the sighting axis having a definable relationship,
- the control/regulation unit (13) is formed and connected in such a way that a measured test piece horizontal angle and optionally a test piece vertical angle can be determined.

12. (Original) Device according to Claim 11, characterized by a handling robot (22) which can be actuated by the control/regulation unit (13) and is arranged in such a way that the optical sighting unit (18) of the geodetic measuring instrument can be aligned by means of the handling robot (22).

13. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 12~~, characterized by a thermal emitter which is arranged in such a way that the test piece (1) can be heated at least from one side for determining the thermal behaviour.

14. (Currently Amended) Device according to Claim 1 ~~any of Claims 1 to 13~~, characterized in that

- the device has means for inclination which are arranged in such a way that the test piece (1) can be inclined by inclining the plinth (2, 2a, 2b) and/or the retainer part (3),
- the control/regulation unit (13) is formed and connected in such a way that measured values of an inclinometer of the test piece (1) are automatically detectable.